

REMARKS

The present response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application is respectfully requested.

Claims 1-47 are pending in this case. Claim 15 has been rejected under 35 U.S.C. § 112, second paragraph. Claims 13, 16-18 have been rejected under 35 U.S.C. § 103(a). Claim 19 is objected to. Claims 1-12, 19-47 are allowed. Independent claims 13, 19, 36 and dependent claims 14-15, 44 have been amended.

With respect to the Examiner's 35 U.S.C. § 103(a) rejections, Applicant has reviewed the cited art and respectfully submits that the art fails to disclose or suggest the Applicant's claimed invention. Therefore, Applicant respectfully traverses and requests favorable reconsideration.

Response to Claim Objections

Claim 19 is objected to due to an informality. Applicant has amended claim 19 in accordance with the Examiner's suggestion. The Examiner is respectfully requested to withdraw the objection to the claims.

Response to 35 U.S.C. § 112, Second Paragraph Rejections

The Examiner rejected claim 15 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Amended claim 15 now features language which make it clear what the subject matter is that the Applicant regards as the invention. Applicant believes that amended claim 15 overcomes the Examiner's rejection based on § 112, second paragraph grounds. The Examiner is respectfully requested to withdraw the § 112, second paragraph rejection.

Response to 35 U.S.C. § 103(a) Rejections

Claim 13

The Examiner rejected claim 13 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,772,334 ("Glawitsch") in view of U.S. Patent No. 5,557,798 ("Skeen et al."). Applicant respectfully submits that the prior art fails to disclose or suggest at least the step of determining that a received packet comprises a source address corresponding to itself. Therefore, Applicant respectfully traverses the rejections and request favorable reconsideration.

While continuing to traverse the Examiner's rejections, Applicant, in order to expedite the prosecution, has chosen to clarify and emphasize the crucial distinctions between the present invention and the devices of the patents cited by the Examiner. Specifically, claim 13 has been amended to include a method of detecting intrusion attempts by an imposter for use in a victim node in a communications network, the method comprising the steps of determining that a received packet comprises a source address corresponding to itself; and in response thereto, transmitting an emergency packet to a destination node and resending the emergency packet in response to receipt of an emergency packet request transmitted from the destination node.

Glawitsch teaches a system and a method for preventing a spoofed denial of service attack in a networked computing environment is described. A hierarchical protocol stack is defined and includes a plurality of communicatively interfaced protocol layers with at least one session-oriented protocol layer. A packet requesting a session with the session-oriented protocol layer is received from the networked computing environment. The request packet includes headers containing a source address of uncertain trustworthiness. The request packet is acknowledged by performing the following operations. First, a checksum is calculated from information included in the request packet headers. A request acknowledgement packet is generated. The request acknowledgement packet includes headers containing the checksum as a pseudo sequence number and the source address in the request packet headers as a destination address. Finally, the request acknowledgement packet is sent into the networked computing environment. An acknowledgement packet is received from the networked computing environment. The acknowledgement packet includes headers containing an acknowledgement number. The acknowledgement packet is validated by performing the following operations. First, a validation checksum is calculated from information included in the acknowledgement packet headers. Then, the validation checksum is compared to the acknowledgement number of the acknowledgement packet. No state is maintained by the authenticating system until the comparison has succeeded.

Skeen et al. teaches a communication interface for decoupling one software application from another software application such that communications between applications are facilitated and applications may be developed in modularized fashion. The communication interface is comprised of two libraries of programs. One library manages self-describing forms which contain actual data to be exchanged as well as type information regarding data format and class definition that contain semantic information. Another library manages communications and includes a subject mapper to receive subscription requests regarding a particular subject and map them to particular communication disciplines and to particular services supplying this information. A number of

communication disciplines also cooperate with the subject mapper or directly with client applications to manage communications with various other applications using the communication protocols used by those other applications.

It is submitted that in the method of Glawitsch, the requesting 'client' 71 sends a client SYN packet 74 to the server 73. The firewall 72, however, intercepts the client SYN packet 74 and generates a firewall SYN-ACK packet 75. The firewall SYN-ACK packet 75 is addressed to the system at the source address specified in the TCP header of the client SYN packet 74. If a valid requesting client 71 sent the client SYN packet 74, the requesting client 71 will respond to the firewall SYN-ACK packet 75 by sending a client ACK packet 76. See col. 7, lines 7-22. Thus, the requesting client responds to the firewall SYN-ACK packet by sending the client-ACK packet.

If the client SYN packet 74 was spoofed, however, that is, sent with a fraudulent source address, two outcomes exist. First, if the spoofed source address is not in use by another system, no responding client ACK packet 76 will be generated and the original client SYN packet 74 will be ignored. Alternatively, if the spoofed source address is in use by another system but that system did not send the original client SYN packet 74, that system will send a client reset (RST) packet. See col. 7, lines 23-34.

Thus, in the method of Glawitsch, the requesting client only sends a response if it first receives a firewall SYN-ACK packet. If no firewall SYN-ACK packet is received, it does not generate a response. Further, if the client SYN packet was spoofed and is in use by another system (i.e. the 'victim' system), that system sends a client reset packet. The client reset packet, however, is only sent in response to the other system receiving the firewall SYN-ACK packet.

In contrast, in the intrusion and jamming detection mechanism of the present invention, the victim node (i.e. the other system) is operative to generate the emergency packet in response solely to detecting the transmission of packet having its source address, i.e. the packet was generated and transmitted by an imposter node. The victim node does not wait for a packet to be directed to itself, rather it scans the headers of packets transmitted over the shared media. If a packet is detected that has a source address identical to its own, it determines that the packet must have originated from an imposter node and transmits an emergency packet to a destination node. The destination node being the node indicated by the destination field of the packet sent by the imposter node and received by the victim node. This is performed not in response to receiving a packet (SYN-ACK, or otherwise) that is addressed to itself, but rather in response to detecting a packet directed to a node (i.e. the destination node) other than itself. This feature is neither taught nor suggested by Glawitsch and Skeen et al.

It is submitted that the combination of Glawitsch and Skeen et al. would not result in the claimed invention. The combination suggested by the Examiner fails to teach or suggest all the claims limitations. Specifically, the combination of Glawitsch and Skeen et al. fails to teach at least the step of determining that a received packet comprises a source address corresponding to itself.

It is believed that amended independent claim 13 overcomes the Examiner's § 103(a) rejection based on the Glawitsch and Skeen et al. references. The Examiner is respectfully requested to withdraw the rejection based on § 103(a).

Claim 16

The Examiner rejected claim 16 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,772,334 ("Glawitsch") and U.S. Patent No. 5,557,798 ("Skeen et al.") and further in view of U.S. Patent No. 5,568,476 ("Sherer et al."). Applicant respectfully submits that the prior art fails to disclose or suggest at least the step of determining that a received packet comprises a source address corresponding to itself. Therefore, Applicant respectfully traverses the rejections and request favorable reconsideration.

Claim 16 depends from claim 13. Based on the arguments present above in connection with claim 13, Applicant also submits that claim 16 is not obvious in light of the combination of the Glawitsch, Skeen et al. and Sherer et al. references. The Applicant respectfully traverses the rejection of claim 16 and submits that the presently claimed invention is patently distinct over Glawitsch and Skeen et al. in view of Sherer et al. The Examiner is respectfully requested to withdraw the rejection based on 35 U.S.C. §103(a).

Claims 17-18

The Examiner rejected claims 17-18 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,772,334 ("Glawitsch") and U.S. Patent No. 5,557,798 ("Skeen et al.") and further in view of U.S. Patent No. 6,785,823 ("Abrol et al."). Applicant respectfully submits that the prior art fails to disclose or suggest at least the step of determining that a received packet comprises a source address corresponding to itself. Therefore, Applicant respectfully traverses the rejections and request favorable reconsideration.

Claims 17-18 depend from claim 13. Based on the arguments present above in connection with claim 13, Applicant also submits that claims 17-18 are not obvious in light of the combination of the Glawitsch, Skeen et al. and Abrol et al. references. The Applicant respectfully traverses the rejection of claims 17-18 and submits that the presently claimed invention is patently distinct over

Glawitsch and Skeen et al. in view of Abrol et al. The Examiner is respectfully requested to withdraw the rejection based on 35 U.S.C. §103(a).

Correction of Typographical Errors

Amendments haven been made to correct grammatical and usage errors in the specification. No new matter has been added to the application by these amendments.

Conclusion

In view of the above amendments and remarks, it is respectfully submitted that independent claims 1, 19, 28, 36, 47 and hence dependent claims 2-12, 14-18, 20-27, 29-35, 37-46 are now in condition for allowance. Prompt notice of allowance is respectfully solicited.

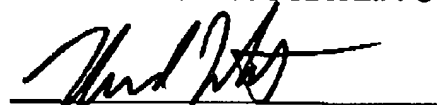
In light of the Amendments and the arguments set forth above, Applicant earnestly believes that they are entitled to a letters patent, and respectively solicit the Examiner to expedite prosecution of this patent applications to issuance. Should the Examiner have any questions, the Examiner is encouraged to telephone the undersigned.

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Respectfully submitted,

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